

We whose Names are underwritten do hereby testify the Truth of the Matters of Fact in the within written Letter related,

Benjamin Master, a Jurat of the Town, aged 74.

Robert Hammond, Senior, a Jurat of the Town, aged 77.

William Godden, a Fisherman, aged 74.

Thomas Marsh, a Fisherman, aged 72.

William Hall, a Fisherman, aged 73.

James Godden, a Fisherman, upward of 60.

III. *Miscellaneous Observations made about Rome, Naples and some other Countries, in the Year 1683 and 1684; and communicated to the Publisher by Tancred Robinson M. D. R. S. S.*

SIR,

YOU having been pleas'd to think some of my Observations might be agreeable to the Publick, I shall here freely give you them (such as they are) omitting those that were formerly extracted out of the MSS. Diaries of my Travels, some of which are Printed in several *Philosophical Transactions*, and others in some of Mr. Ray's English Tracts.

In my Journey from *Rome* to *Naples* I observ'd on the Rubbish of the *Tre Taberne* an unusual Vegetable for that place, remote from Town or House, which was the *Ficus Indica Spinosa* commonly call'd the *Opuntia* or *Tuna*, and by our Writers of *America* the *Prickly-Pear*, whose Juice gives the Urine a red Colour; when I came to *Naples*, I found it there near the Rocks, and in some wild solitary Places like a Native. If the *Spaniards* planted it, they chose desert Situations. On this Plant the *Cochineel*

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Vermiculus is said to feed in great Numbers, before it changes into the *Chrysalis* or *Aurelia* of a *Lady-Cow* : but the Colour lies in the *Nymph-Worm* before it turns a *Beetle*. This gives me occasion to reflect upon the many Species of our *European Vermiculi*, some of which might be found to yield rich Colours (if try'd) : We are certain the Maggot of our *Ilex* gives the *Kermes*, and a noble Scarlet Dye before it turns into a Fly. Many Shell-Fish (which are a sort of Insect) contain Purple Juices.

This brings on another Remark I made in passing the *Apennines* and *Alps*, where I noted in some Beds or *Strata*, and even in the midst of the hardest Rocks, great varieties of perfect Shells, that never occur'd to me on the *Italian Shores*, nor in any of the numerous *Museums* of that Country : so I guess they might be *Exotick*.

Going further on the *Via Appia*, I observ'd abundance of the *Siligna Arbor* or *Carob Tree*, commonly call'd *Panis S. Joannis Baptiste* ; on the Pulp whereof many poor People were feeding. The Husks tasted like *Manna* to me. Near them grew plenty of the *Arbor Jude*.

The *Arbutus*, or *Strawberry Tree*, was common in the woody places ; if this grows wild in the South West parts of *Ireland*, as some affirm, I shall think them much warmer than any Counties of *England*.

Before I enter'd the beautiful *Campania* of *Naples* large Woods of *Cork Trees* grew on each side the Road, where the Inhabitants were decortivating them. I ask'd if the Trees did not perish : they answer'd, some did, but the Acorns return'd annual Supplies. The Women and Children wore Shoes made of the Bark.

Coming near *Capua* I observ'd a Species of *Ash*, or *Ornus*, on the Trunk whereof many *Saccharin Concretions* were visible. This prov'd the true *Manna*, that issues out thro' the Incisions made in this Tree by the Inhabitants of *Calabria*. Swarms of *Cicada's* were sucking the
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Body and Boughs, and perhaps by wounding then made way for fresh *Manna*. Here I may note, that many Insects have not only a *Proboscis* to bore and draw out the Juices of Plants for Aliment, but other proper Instruments to convey their Eggs into Vegetables and Animals, where they may find Covert and Food when they come to hatch, in the Gall-Tumours, and other Excrescences occasion'd by the Wounds of the Parent Insects, that make such variety of *Cuniculi* in all parts of Plants, and even in the cutaneous parts of living Creatures and in dead Flesh.

This confirms me, that many Gums and Exudations find their way out of Vegetables thro' the Wounds of Insects and other Apertures. Most *Voyagers* thro' the *East Indies* affirm, that *Gum Lack* is work'd and made by large *Ants* that cover the Trees. I rather think the Insects suck and terebrate the Tree, and so give vent to that peculiar Sap that hardens in the Sun. This may extend to most Balsamiferous, Gummiiferous, and Saccharine Plants, especially in hot Climates where Insects abound, and are more active. In cold Climates the Saps of many Vegetables will boyl into Sugars, as that of Maple, Birch, Reeds, &c. Not but that the Fluids of Plants (like those of Animals) will spontaneously break thro' their Vessels in a Plethory, and make on the superficial Parts various Eruptions and Congestions.

Discourſing of *Manna* I may here take Notice there are many adulterations of this Drug: all paſſes for the *Calabrian*, whereas that of *Brianſon* is from the *Larix*, that of *Persia* from the *Myrica*, and theſe frequently mixt with the Juices of Spurges, and other Purgative Ingredients. I muſt not here deny that Dew will ſometimes in cool Mornings ſhoot, and congeal into a ſolid, ſweet, white Subſtance, which I once obſerv'd in very hot Weather before Sun-riſe.

Upon viewing the *Vulcano's* about *Naples*, *Vesuvius* on the East side, the *Solfatara* and *Monte di Cinere* on the West near *Puzzuolo* and *Bajæ*; I observ'd the same Face of Nature, which I believe runs thro' all the other *Vulcano's* of our Globe, *viz.* heaps of Pumice Stones and Cinders of *Marchasites* on the sides, with Beds of Flower of Brimstone on the tops. The Holes and Cavities in those calcin'd Minerals seem to be the *Nidus* of the *Sulphur*, which hath been sublim'd by the Heat and Fire of that vast Mass of *Pyrites*, that compose the Bowels of those *Vulcano's*, and lye scatter'd thro' many parts of the Earth, even under the Sea, where they sometimes germinate, ferment, and take Fire, throwing up little *Islands*. Earthquakes and other *Choc's* of the Globe may spring from the Mines of these combustible and explosive Minerals, loaden with Brimstone and Elastic Salts. Hence some Account may be given of *Therma* or hot Baths, whose Waters gliding thro' these hot Beds take their *Gas*. Of such Medicinal boiling Waters and Stoves, there are more about *Naples* than in any place I ever saw or heard of, the whole Country being continually pervaded by hot Streams.

Walking round this City I found *Palm Trees*, some with unripe *Dates* hanging down, others without any Fruit: and there was another Species of *Palm* that sweats out the *Gum Dragon*: I suppose the Monks had transplanted them out of *Africa*. I saw growing here many *Sugar-Canes*, *Rice*, *Maiz*, abundance of the purging *Senna*, and *Cummin Seed*. Thro' the whole *Campania* of *Naples* I observ'd the same Vegetables to be larger and more proud than in other parts of *Italy*, as the *Platanus*, the *Lentiscus*, the *Terobintus*, the *Pistaches*, the *Oleanders*, *Agnus Castus*, *Barba Jovis*, the *Tragacanth*, the *Styrax*, the *Capers*, &c. The *Melons*, *Jujubes*, the *Azaroles*, and other Fruits were of a better Taste. The *Gossypium*, with the Cor-

ron breaking out of the husks, adorn'd some of the Fields; the Hedges full of *Pomegranats*, *Almonds*, *Tamarisk*, *Sumach*, *Cedrus Lycia* (a sort of Juniper or Savin) abundance of *Phillyrea*, *Alaternus*, *Cisti*, *Cytisi*, *Myrtles*, *Spanish Broom*, *Bays*, *Laurustines*, &c. all wild, Indigenous of that warm Soil and kind Climate. The Water-Melons, the Olives, the Oranges, Lemons and Citrons were better than about *Genoa* or in *Provence*.

The *Lotus Arbor* or *Nettle Tree*, the *Paliurus* or *Christ Thorn*, the *Ricinus* or *Palma Christi*, common in the Hedges, with several *Thymelea's*.

I saw them fishing for *Coral*, and *Hippocampi*: the first did not come soft out of the Sea; the hard Incrustation covers the Vegetable part that bears Seed, as the *Alga's* and *Fuci* do. They take the *Sword-Fish* by darting a Spear into him, as they do the *Whales* in the *Greenland* Fishery.

When dark Night came on, I could see Multitudes of Luminous Flies thro' the *Campania* of *Naples*: perhaps our Male *Gloworm*, or flying *Cicindela*, may abound there; not but that many other Insects may carry such Lanthorns about them. The *Scorpions* creep out about that time; and I have found them often in Bed, with the *Punaises*.

The Hedges are full of *Lizards* of various Colours; and the *Cicada's* chirp and sing towards Evening. I observ'd several Species of stinging Spiders in the Corn Fields, some of which, in hot Harvests, may prove *Tarantula's*; the Poysons of Animals and Plants increasing with the approach of the Sun, and the Heats of Climates. Abundance of Silk-Worms were spinning on the Trees and Shrubs; the Birds prey'd upon them, before they could change into *Papilio's*, as they do upon swarms of *Locusts*.

I eat often their young Frogs, Tortoises and Snails, served up with Oyl and Pepper, which agreed well with me : so did their *Sea Urchins*, and the *Urtica Marina*, (called *Sea Gelly* or *Blubber*, tho' it be an Animal, having a true Heart, and Vessels for the Circulation of Fluids) Some of their Thistles are no ungrateful Sallet.

I saw some Vitriol Works about *Siena*, *Rome* and *Puzzuolo*; those of *Alum* only about *Civita Vecchia*. Amongst the Sands of the *Adriatic* Sea I observ'd many white, clear, shining Flints; which they told me were carried to *Venice*, to make the fine Chrystal Glafs at *Muran*.

Upon reading our ingenious Dr. *Musgrave*, de *Geta Britan. & Synop. Chronolog. Dom. Sever*. I consulted my Diary taken at *Rome*. The Magnificent *Septizonium* figur'd by him stood near the Foot of the *Palatine* Hill, on the *E.S.E.* side, overlooking the *Via Appia* and the *Circus Maximus*, the *Amphitheatre* of *Titus* being near on the other Side. By the number of *Portico's* (which were Seven) it might contain Multitudes of People, as Spectators of the Triumphal Entries and the publick Games. But I would not be thought to differ from our *Learned Countryman*, who with good Authority, thinks it the *Sepulchretum* of that Imperial Family; tho' most of the Ancient *Mausoleum's*, (at least those I saw) were *Rotunda's*, or *Columbaria's*, for the more convenient placing the *Urns* of the Kindred; as that of *Augustus* near the *Campus Martius*; that of *Adrian* on the other Bank of the *Tyber*; those said to be of *Scipio*, of *Cicero*, and *Munatius Plancus*, near *Gaeta* and the *Via Appia*; that of *Virgil* on the side of Mount *Paufilippus*; that of *C. Metella* and some others on the *Via Flaminia*. Some were Pyramidal as that of *Cestius* in the Wall of *Rome*, and a few others on the public Roads. This *Septizonium Severi* seems to differ from the rest of those Ancient *Sepulchretum's*, which
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might be varied according to the Fancy and Humour of great Families.

This Urn Burial was only in Fashion amongst the *Gentes Majores* : as for the dead Bodies of the *Plebeians* and Slaves, they were generally laid in places where they had dug Stone ; and those Quarries became *Catacombes*. The Laws prohibited them to bury within a City, unless the Bodies were first reduc'd to Ashes.

I observ'd in many of the Ruins about *Rome* and *Naples*, great Stones laid close, and wedged very fast with little or no Cement ; the Bricks, towards the middle of a Building, were generally of a *Rhomboidal* Figure, very Smooth, Shining and Hard, laid in Plaister as firm as Marble. Their Mortar was much more durable then ours, as appears at this Day by their *Aqueducts* and *Piscina's*, the *Cento Camare*, and *Caligula's* Bridge under Water at *Baja*. *Pliny* says, they made use of the *Terra Puteolana*, but the present Inhabitants have lost the way of tempering it.

During my abode at *Genoa*, *Leghorn*, *Ostia* and *Civita Vecchia*, I observ'd many *Torpedo's* or *Cramp Fishes*, most accurately Anatomized by *S. Lorenzini* ; plenty of *Sphyrana's*, (a Species of Sea Pike, a-kin to the Needle-Fishes) The *Uranoscopus*, call'd *Bocca in Capo* and *Prete*. The *Mola* or Sun Fish. The *Dentex* or *Pentalis*, *Altaveli's* a sort of *Pastinaca*. The *Pesce Balestra* or *Capriscus*. The *Pesce Pettine* or *Novacula*. The *Zygana* or Ballance Fish, as large as the Saw-Fish or most Sharks. The *Scolopax* or *Trombetta*, call'd by our Seamen the Bel-lows or Trumpet-Fish. The *Draco Marinus*. The Tun-ny-Fish. The *Centrina* or *Pesce Porco*. The *Aquila*. The *Scorpius Major*, with Varieties of *Turdi* in the Markets. But what pleas'd me most, were some odd Sea Animals, as the *Lepus Marinus*, (a Species of naked Snail) the *Hystrix Marinus*, or *Eruca*, call'd by the Seamen *Pincio*, with a Brush hanging out of the Tail, like the *Byssus* or

Silk of the *Pinna*. Many *Tamburo's* or Drum-Fishes; Plenty of *Murana's*. I observ'd a strange Sea Animal, call'd the *Microcosmo marino*, with many Shells, *Tubuli* and Vegetables growing or sticking to the Back of it, this appear'd to me a-kin to the *Echini Marini*, or rather to the *Stellæ Marine*, being Triangular, and sometimes *Pentadactylous*.

I embark't once with the Fishermen, who shew'd me several *Loligo's*, *Polypi*, and *Sepia's*, or Cuttle-Fishes, (all *Crustaceous*) some of them were casting out their Ink in the Water: I supposed some Sharks, Dog-Fishes, or other Enemies, were near them; this black Liquor may be the Gall of those Animals. In the Nets, I often found Sea Insects, and Vegetables; and indeed a new World, undescrib'd by natural Writers, at least unknown to me: but for want of the Art of Designing or Drawing, abundance of things escap'd me, and were utterly lost; therefore I would advise all Travellers to be conversant in that most useful Science.

I observ'd the *Italians* near the *Alps* and *Appennines*, call'd several Birds *Francolino's*, as our Red, Grey and Black Game; and even their red and white Partridges; the different Colours of the Hens from the Cocks, the many Variegations in Feathers, the different Ages and Places, have all given occasion to multiply Names and Species; the same may happen in Fishes, Quadrupeds, Insects, and all the Divisions of *Zoology*; and even in *Botany* and *Minerology*.

The *Italians* call many of their little fat Birds *Beccafico's*, that feed upon Figs, Grapes, and other sweet Fruits. So the *French* multiply their *Ortulans*, taken in the Vineyards and Gardens. Some of the Antient Writers take Notice that the *Romans* us'd to feed their Geese and other Birds with Figs, when they intended to swell their Livers to a monstrous Bigness.

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The *Merops* or *Apiaster* is common on their Brooks; it flies like our Kings-Fisher, and preys not only upon Insects but Fish. There is a very beautiful Bird in *Italy*, that suspends its Nest down from the Boughs of Trees. When I saw it fly by me, I took it for an *Indian*, from the brightness of its Colours; it is as large as our Missel-Bird and Thrush. *an Icterus Plinii?*

The great *Cock of the Wood* (said to be found in *Ireland*) is common on the sides of the *Italian Hills*, and brought frequently to the Markets. I saw twice or thrice the *Himantopus*, and the *Phenicopterus* or *Flamingo*, (whose Tongue was a Dainty amongst the *Romans*, when they grew Luxurious). I observ'd some *Spoon-bills*: these three last Birds were wading in the Rivers and Marshes, near the Sea. Once I spy'd some *Peleicans* on the *Adriatic*, near the mouth of the *Po*. The *Avis Diomedea* was hung up dry'd in one of the *Museums* at *Florence*, but they told me it had been taken on some of the Isles of the *Archipelago*.

On the *Laguna of Venice*, I saw several Species of *Mergi*, *Lari*, *Colymbi*, and other Water Fowls, most of which Div'd. I was surpriz'd with the Variety of them, having not seen so many on other Coasts: perhaps the hard Winter had forc'd some unusual Birds thither. The Monks and Fryers told me, they eat some of those Sea Birds in *Lent* and on Fast Days, because they liv'd upon Fish, and had a piscose Taste, as the *French* pretend their *Macreuse* to have. which is a sort of Sea Duck, common on the Coast of *Normandy*, and brought to the Markets, even at *Paris* on *Maigre Days*; of which I gave a long History in the *Philos. Transact. An. 1685. N^o. 172.*

Buffalo's are common in the Kingdom of *Naples*, and in some parts of *Lombardy*, where they plough and draw
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with them. A peculiar Cheese is made of their Milk (call'd *Casio di Cavallo*) rowl'd up like stiff pieces of Ribbon. Out of their black shining Horns they make Snuff-boxes and Combs. The Creature is unruly, and therefore they lead them with Iron or Brass Rings drawn thro' their Noses. They make a Buff Leather of their Skins. I once saw some hairy Sheep feeding on a Common; perhaps they had been brought from *Africa*.

In passing the high *Alps*, I had a View of the *Ibex* or *Steinbock*, whose large Horns are recurvated almost as far back as the Tail; they are very ponderous for the bulk of the Animal, having many knotty Rings, that may help them in climbing. They are rarely taken.

The *Rupicapra* or *Chamois*, is very common on the sides of the Cliffs, whose Skins afford the soft Leather. The *Mus Alpinus*, or *Marmota*, is as large as a Rabbit, will soon grow tame in Houses, tho' brought down from the Summits of the highest Mountains, where it will grow fat.

I have seen in several Towns of *Italy* fresh strong *Porcupines*, which the Inhabitants told me were taken in the Hedges and Ditches thereabouts, tho' much more rare than our Land *Urchins*. In the *Grisons* Country, and in some Cantons of *Switzerland*, I have often observ'd the *Ranunculus Viridis* or small Tree-Frog, perching on the Boughs and Leaves.

In the Northern Parts of *Germany* I saw several *Elk-Skins*, and those of the *Rhin-Deer* stuffed, and set up in *Museum's*, but never alive: tho' the Animals are said to be common in *Muscovy* and *Lapland*, and sometimes seen in the Forests of *Prussia*.

The Skins of *Hippopotami* (said to be the *Behemoth*) are in some Collections of Curiosities in *Italy* and *Holland*: so are those of the *Musk-Deer*, one of which is in the *Museum* of our *Royal Society*.

Give

Give me leave here to reflect a little upon the late *Aurora Borealis*, whose *Phænomena* you have so well describ'd and explain'd in your late *Philosophical Transactions*, No 347. I am of your Opinion, that those Phosphorous or Luminous Appearances in the Firmament, proceed from the various *Effluvia* perspir'd out of our Globe, or passing thro' it; for I have seen those Lights over *Vesuvius*, the *Strombulo* Islands, and towards *Ætna* in dark Nights, when those *Vulcano's* were not Smoking nor burning, their Sides and Tops being passable to Travellers at that time, and all their outward parts quiet. We are certain that *Iceland* and *Greenland* abound with *Vulcano's*; so may North East *Lapland*, North *Russia* and *Tartary*, where vast Chains of Mountains are said to run. The *Jesuits*, and other Travellers, relate many prodigious Eruptions of Fires, and Earthquakes towards the North of *China*; but nearer the Pole the Earth must be clos'd and pent up many Months, by the long severe freezings and continual Snow and Ice, which relaxing towards Spring, may give vent to that vast Mass or Magazine of perspirable Matter, that had been kept so long in hot Subterraneous Prisons. This may be one Reason why Animal Bodies themselves are often sensible of Changes at that Season in our Climate, when Perspiration is upon such an Increase; but I will not take up your time any longer, especially upon a Subject that you understand so well.

S I R,

Your most humble Servant,
Tancred Robinson.